

## CLAIMS

1. An alkaline battery comprising: a positive electrode comprising a positive electrode active material; a negative electrode comprising a negative electrode active material; a separator disposed between said positive electrode and said negative electrode; and an electrolyte, wherein

said positive electrode active material comprises spherical nickel oxyhydroxide comprising a crystal of a  $\beta$ -type structure,

a powder X-ray diffraction profile of said spherical nickel oxyhydroxide obtained using a Cu target is such that a half-width  $W$  of a diffraction peak  $P$  derived from a (001) plane is  $0.6^\circ$  or less,

the ratio  $H/W$  of a height  $H$  of said peak  $P$  to said half-width  $W$  is 10,000 or more, and

nickel contained in said spherical nickel oxyhydroxide has a mean valence of 2.95 or more.

2. The alkaline battery in accordance with claim 1, wherein the nickel contained in said spherical nickel oxyhydroxide has a mean valence of 3 or more.

3. The alkaline battery in accordance with claim 1, wherein said spherical nickel oxyhydroxide carries a cobalt oxide, and cobalt contained in said cobalt oxide has a mean valence of greater than 3.

4. The alkaline battery in accordance with claim 3,

wherein said spherical nickel oxyhydroxide carries said cobalt oxide in an amount of 0.5 to 15 parts by weight per 100 parts by weight of said spherical nickel oxyhydroxide.

5. The alkaline battery in accordance with claim 1, wherein said positive electrode further contains at least one additive selected from the group consisting of zinc oxides, calcium oxides, yttrium oxides, and titanium oxides.

6. The alkaline battery in accordance with claim 5, wherein said positive electrode contains 0.1 to 10 parts by weight of said additive per 100 parts by weight of said spherical nickel oxyhydroxide.